

Compost Works: Erosion Control

Project Date: July 2003

Organization: Iowa Department of Transportation

> Location: Interstate 235

Application Method: 3" compost as soil

Contact: Wes Musgrove, Iowa DOT 800-251-2707

When Reilly Construction was contracted by the Iowa Department of Transportation (IDOT) to begin grading and vegetating an area along the new I-235 corridor, topsoil was a logical first choice to help supplement nutrients and add structure to the disturbed roadsides. Stacie Johnson, representative of Organic Matters, suggested using a three-inch layer of compost instead. In contrast to the cumbersome spreading of topsoil, which often includes large clods and rocks, the compost has a much more uniform size and can be a lot easier to apply.

The Situation

- ♦ Widening removed most organic matter and compacted
 - Cost effective, time saving methods of restoring visible. high traffic areas needed



Example of rills caused by exposed subsoil not treated with compost along I-235

The Problems

- Disturbance and compaction
- Lack of irrigation
- High visibility of project

The Answer

Compost

Application

- Three-inch layer of compost incorporated into soil
- ◆ DOT "Urban Seed Mix" (fine leaf tall fescue, creeping red fescue and perennial rye)
- Approximately five acres of roadside
- Used a bulldozer with a blade to spread the compost

Results

- Dry summer of 2003 led to little germination, most seed stayed dormant
- Although seed was dormant, compost provided better erosion control than hyrdoseeding or open
- Sprouted in spring of 2004; provided lush, green cover



Established vegetation along I-235 corridor helps maintain this slope

Easy to maintain seed mix responds well to occasional mowing

For every three-inches of topsoil brought to a project, we can replace that with one-inch of compost. This reduces product cost and transportation cost by two thirds.

Stacie Johnson, Organic Matters

Compost Works For:

Soil Incorporant

- Turf establishment
- Garden bed preparation
- Reclamation/remediation
- Nursery production
- Roadside vegetation

Surface Applied

- Garden bed mulch
- Erosion control media

Turf Topdressing

Manufactured Topsoil

Growing Media Component

- Container/potting substrates
- Landscape (e.g. rooftop, raised planters)
- Backfill mixes (tree and shrub plantings)
- Golf course (e.g. tee, green, divot mixes)

Physical Improvement

- Improves soil structure
- Moisture management

Chemical Balance

- Modifies and stabilizes
- Increases cation exchange capacity

Biological Impact

- Supplies nutrients and soil biota
- Suppresses plant diseases

Other Benefits

- Binds/degrades contaminants
- Binds nutrients

